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## LISTING OF CLAIMS

- 1. (previously presented) A color forming composition, comprising:
- a) a leuco dye;
- b) an infrared absorber admixed with or in thermal contact with the leuco dye; and
- c) a stabilizer selected from the group consisting of thiolane-nickel complex, spiroindane, and mixtures thereof, wherein said stabilizer is admixed with the infrared absorber.
- 2. (previously presented) The composition of claim 1, wherein the stabilizer is selected from the group consisting of bis(4-dimethylaminodithiobenzil)nickel; tetrabutyl-phosphonium (SP-4-1)-bis[4,5-di(mercapto-xS)-1,3-dithiole-2-thionato(2)]nickelate(1-) (9C1); 1,1'-spirobi[1H-indene]-5,5',6,6'-tetro1-2,2',3,3'-tetrahydro-3,3,3',3'-tetramethyl- (9CI); 1,1'-spirobi[1H-indene]-2,2',3,3'-tetrahydro-3,3,3',3'-tetramethyl-5,5',6,6'-tetrapropoxy- (9CI); and mixtures thereof.
  - 3. (cancelled).
- 4. (previously presented) The composition of claim 1, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidenes, guaizonyl dyes, croconium dyes, and mixtures thereof.
- 5. (previously presented) The composition of claim 4, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidene and guaizonyl dye and the stabilizer is a nickel dithiolane complex.
- 6. (previously presented) The composition of claim 5, wherein the infrared absorber is selected from the group consisting of 2,4,6(1H,3H,5H)-pyrimidinctrione 5-[2,5-bis[(1-ethyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)ethylidene]cyclopentylidene]- (9CI); 2,4,6(1H,3H,5H)-pyrimidinetrione 5-

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[2,5-bis[(1,3-dihydro-1,1,3-trimethyl-2H-benz[c]indol-2-ylidene]ethylidene]eyelopentylidene]-1,3-dimethyl- (9Cf); methanaminium N-[5-[3-[5-(dimethylamino)-2-thienyl]-2-hydroxy-4,5-dioxo-2-cyclopenten-1-ylidene]-2(5H)-thienylidene]-N-methyl- inner salt (9Cl); cyclobutenediylium 1,3-bis[3,8-dimethyl-5-(1-methylethyl)-1-azulenyl]-2,4-dihydroxy- bis(inner salt) (9Cl); and mixtures thereof.

- 7. (previously presented) The composition of claim 1, wherein the color forming composition is optimized for development using infrared radiation having a wavelength of from about 750 nm to about 900 nm.
- 8. (previously presented) The composition of claim 1, wherein the leuco dye is selected from the group consisting of fluorans, phthalides, amino-triarylmethanes, aminoxanthenes, aminothioxanthenes, amino-9,10-dihydro-acridines, aminophenoxazines, aminophenothiazines, aminodihydro-phenazines, aminodiphenylmethanes, aminohydrocinnamic acids and corresponding esters, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, indanones, leuco indamines, hydrozines, leuco indigoid dyes, amino-2,3-dihydroanthraquinones, tetrahalo-p,p'-biphenols, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, phenethylanilines, and mixtures thereof.
- 9. (previously presented) The composition of claim 1, further comprising an anti-oxidant selected from the group consisting of chroman, vitamin E, vitamin E analogs, astaxanthin, ascorbic acid, carotene, and mixtures thereof.
  - 10. (previously presented) A color forming composition, comprising:
  - a) a leuco dye;
  - b) an infrared absorber admixed with or in thermal contact with the leuco dye; and
  - e) an anti-fade agent selected from the group consisting of chroman, vitamin E, vitamin E analogs, astaxanthin, ascorbic acid, carotene, and mixtures thereof, wherein said anti-fade agent is admixed with the leuco dye.

- 11. (previously presented) The composition of claim 10, wherein the anti-fade agent is selected from the group consisting of chroman, vitamin E, vitamin E analogs, astaxanthin, and mixtures thereof.
- 12. (previously presented) The composition of claim 11, wherein the anti-fade agent is chroman.
- 13. (previously presented) The composition of claim 11, wherein said leuco dye is a fluoran.
- 14. (previously presented) The composition of claim 10, wherein the leuco dye is selected from the group consisting of fluorans, phthalides, aminotriarylmethanes, aminoxanthenes, aminothioxanthenes, amino-9,10-dihydro-acridines, aminophenoxazines, aminophenothiazines, aminodihydro-phenazines, aminodiphenylmethanes, aminohydrocinnamic acids and corresponding esters, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, indanones, leuco indamines, hydrozines, leuco indigoid dyes, amino-2,3-dihydroanthraquinones, tetrahalo-p,p'-biphenols, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, phenethylanilines, and mixtures thereof.
- 15. (previously presented) The composition of claim 10, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidenes, guaizonyl dyes, croconium dyes, and mixtures thereof.
- 16. (previously presented) The composition of claim 10, wherein the color forming composition is spin-contable.
  - 17-44. (cancelled).
  - 45. (previously presented) A color forming composition, comprising:
  - a) a leuco dye;
  - b) an infrared absorber admixed with or in thermal contact with the leuco dye; and

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- c) a chroman stabilizer admixed with the infrared absorber, said chroman stabilizer configured for both stabilizing the infrared absorber and inhibiting oxidation of the leuco dye.
- 46. (previously presented) The composition of claim 45, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidenes, guaizonyl dyes, croconium dyes, and mixtures thereof.
- 47. (previously presented) The composition of claim 46, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidene and guaizonyl dye.
- 48. (previously presented) The composition of claim 47, wherein the infrared absorber is selected from the group consisting of 2,4,6(1H,3H,5H)-pyrimidinetrione 5-[2,5-bis[(1-ethyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)ethylidene]cyclopentylidene]- (9CI); 2,4,6(1H,3H,5H)-pyrimidinetrione 5-[2,5-bis[(1,3-dihydro-1,1,3-trimethyl-2H-benz[c]indol-2-ylidene)ethylidene]cyclopentylidene]-1,3-dimethyl- (9CI); methanaminium N-[5-[3-[5-(dimethylamino)-2-thienyl]-2-hydroxy-4,5-dioxo-2-cyclopenten-1-ylidene]-2(5H)-thienylidene]-N-methyl- inner salt (9CI); cyclobutenediylium 1,3-bis[3,8-dimethyl-5-(1-methylethyl)-1-azulenyl]-2,4-dihydroxy- bis(inner salt) (9CI); and mixtures thereof.
- 49. (previously presented) The composition of claim 45, wherein the color forming composition is optimized for development using infrared radiation having a wavelength of from about 750 nm to about 900 nm.
- 50. (previously presented) The composition of claim 45, wherein the leuco dye is selected from the group consisting of fluorans, phthalides, aminotriarylmethanes, aminoxanthenes, aminothioxanthenes, amino-9,10-dihydro-acridines, aminophenoxazines, aminophenothiazines, aminodihydro-phenazines, aminodiphenylmethanes, aminohydrocinnamic acids and corresponding esters, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, indanones, leuco indamines, hydrozines,

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leuco indigoid dyes, amino-2,3-dihydroanthraquinones, tetrahalo-p,p'-biphenols, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, phenethylanilines, and mixtures thereof.

- 51. (previously presented) The composition of claim 45, further comprising an anti-oxidant selected from the group consisting of vitamin E, vitamin E analogs, astaxanthin, ascorbic acid, carotene, and mixtures thereof.
  - 52. (previously presented) A color forming composition, comprising:
  - a) a leuco dye;
  - b) an infrared absorber admixed with or in thermal contact with the leuco dye;
- c) a chroman stabilizer admixed with the infrared absorber, said chroman stabilizer formulated for stabilizing the infrared absorber; and
- d) an anti-oxidant, other than the chroman stabilizer, formulated for inhibiting oxidation of the lenco dye.
- 53. (previously presented) The composition of claim 52, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidenes, guaizonyl dyes, croconium dyes, and mixtures thereof.
- 54. (previously presented) The composition of claim 53, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidene and gualzonyl dye and the stabilizer is a nickel dithiolane complex.
- 55. (previously presented) The composition of claim 54, wherein the infrared absorber is selected from the group consisting of 2,4,6(1H,3H,5H)-pyrimidinetrione 5-[2,5-bis[(1-ethyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)ethylidene]eyclopentylidene]- (9Cf); 2,4,6(1H,3H,5H)-pyrimidinetrione 5-[2,5-bis[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]eyclopentylidene]-1,3-dimethyl- (9Cf); methanaminium N-[5-[3-[5-(dimethylamino)-2-thienyl]-2-hydroxy-4,5-dioxo-2-cyclopenten-1-ylidene]-2(5H)-thienylidene]-N-methyl- inner salt (9Cf); cyclobutenediylium 1,3-bis[3,8-dimethyl-5-

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(1-methylethyl)-1-azulenyl]-2,4-dihydroxy- bis(inner salt) (9CI); and mixtures thereof.

- 56. (previously presented) The composition of claim 52, wherein the color forming composition is optimized for development using infrared radiation having a wavelength of from about 750 nm to about 900 nm.
- 57. (previously presented) The composition of claim 52, wherein the leuco dye is selected from the group consisting of fluorans, phthalides, aminotriarylmethanes, aminoxanthenes, aminothioxanthenes, amino-9,10-dihydro-acridines, aminophenoxazines, aminophenothiazines, aminodihydro-phenazines, aminodiphenylmethanes, aminohydrocinnamic acids and corresponding esters, 2(p-laydroxyphenyl)-4,5-diphenylimidazoles, indanones, leuco indamines, hydrozines, leuco indigoid dyes, amino-2,3-dihydroanthraquinones, tetrahalo-p,p'-biphenols, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, phenethylanilines, and mixtures thereof.
- 58. (previously presented) The composition of claim 52, wherein the antioxidant is selected from the group consisting of vitamin E, vitamin E analogs, astaxanthin, ascorbic acid, carotene, and mixtures thereof.
  - 59. (previously presented) A color forming article, comprising:
  - a) a leuco dye;
  - b) an infrared absorber admixed with or in thermal contact with the leuco dye; and
- c) a stabilizer selected from the group consisting of thiolane-nickel complex, spiroindane, and mixtures thereof, wherein said stabilizer is overprinted with respect to the infrared absorber.
- 60. (previously presented) The article of claim 59, wherein the stabilizer is selected from the group consisting of bis(4-dimethylaminodithiobenzil)nickel; tetrabutyl-phosphonium (SP-4-1)-bis[4,5-di(mcreapto-κS)-1,3-dithiole-2-thionato(2)]nickelate(1-) (9CI); 1,1'-spirobi[1H-indene]-5,5',6,6'-tetrol-2,2',3,3'-

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tetrahydro-3,3,3',3'-tetramethyl- (9CI); 1,1'-spirobi[1H-indene]-2,2',3,3'-tetrahydro-3,3,3',3'-tetramethyl-5,5',6,6'-tetrapropoxy- (9CI); and mixtures thereof.

- 61. (previously presented) The article of claim 59, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidenes, guaizonyl dyes, croconium dyes, and mixtures thereof.
- 62. (previously presented) The article of claim 61, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidene and guaizonyl dye and the stabilizer is a nickel dithiolane complex.
- 63. (previously presented) The article of claim 62, wherein the infrared absorber is selected from the group consisting of 2,4,6(1H,3H,5H)-pyrimidinetrione 5-[2,5-bis[(1-ethyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)ethylidene]cyclopentylidene]- (9CI); 2,4,6(1H,3H,5H)-pyrimidinetrione 5-[2,5-bis[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]cyclopentylidene]-1,3-dimethyl- (9CI); methanaminium N-[5-[3-[5-(dimethylamino)-2-thionyl]-2-hydroxy-4,5-dioxo-2-cyclopenten-1-ylidene]-2(5H)-thionylidene]-N-methyl- inner salt (9CI); cyclobutenediylium 1,3-bis[3,8-dimethyl-5-(1-methylethyl)-1-azulenyl]-2,4-tlihydroxy- bis(inner salt) (9CI); and mixtures thereof.
- 64. (previously presented) The article of claim 59, wherein the color forming article is optimized for development using infrared radiation having a wavelength of from about 750 nm to about 900 nm.
- 65. (previously presented) The article of claim 59, wherein the leuco dye is selected from the group consisting of fluorans, phthalides, amino-triarylmethanes, aminoxanthenes, aminothioxanthenes, amino-9,10-dihydro-aeridines, aminophenoxazines, aminophenoxazines, aminophenothiazines, aminodihydro-phenazines, aminodiphenylmethanes, aminohydrocinnamic acids and corresponding esters, 2(p-hydroxyphenyl)-4,5-diphenylmidazoles, indanones, leuco indamines, hydrozines,

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leuco indigoid dyes, amino-2,3-dihydroanthraquinones, tetrahalo-p,p'-biphenols, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, phenethylanilines, and mixtures thereof.

- 66. (previously presented) The article of claim 59, further comprising an antioxidant selected from the group consisting of chroman, vitamin E, vitamin E analogs, astaxanthin, ascorbic acid, carotene, and mixtures thereof.
  - 67. (previously presented) A color forming article, comprising:
  - a) a leuco dye;
  - b) an infrared absorber admixed with or in thermal contact with the leuco dye; and
- c) a chroman stabilizer overprinted with respect to the infrared absorber, said chroman stabilizer configured for both stabilizing the infrared absorber and inhibiting oxidation of the leuco dye.
- 68. (previously presented) The article of claim 67, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidenes, guaizonyl dyes, croconium dyes, and mixtures thereof.
- 69. (previously presented) The article of claim 68, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidene and guaizonyl dye.
- 70. (previously presented) The article of claim 69, wherein the infrared absorber is selected from the group consisting of 2,4,6(1H,3H,5H)-pyrimidinetrione 5-[2,5-bis[(1-ethyl-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]cyclopentylidene]- (9CI); 2,4,6(1H,3H,5H)-pyrimidinetrione 5-[2,5-bis[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)cthylidene]cyclopentylidene]-1,3-dimethyl- (9CI); methanaminium N-[5-[3-[5-(dimethylamino)-2-thienyl]-2-hydroxy-4,5-dioxo-2-cyclopenten-1-ylidene]-2(5H)-thienylidene]-N-methyl- inner salt (9CI); cyclobutenediylium 1,3-bis[3,8-dimethyl-5-(1-methylethyl)-1-azulenyl]-2,4-dihydroxy- bis(inner salt) (9CI); and mixtures thereof.

- 71. (previously presented) The article of claim 67, wherein the color forming article is optimized for development using infrared radiation having a wavelength of from about 750 nm to about 900 nm.
- 72. (previously presented) The article of claim 67, wherein the leuco dye is selected from the group consisting of fluorans, phthalides, amino-triarylmethanes, aminoxanthenes, aminothioxanthenes, amino-9,10-dihydro-aeridines, aminophenoxazines, aminophenothiazines, aminodihydro-phenazines, aminodiphenylmethanes, aminohydrocinnamic acids and corresponding esters, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, indanones, leuco indamines, hydrozines, leuco indigoid dyes, amino-2,3-dihydroanthraquinones, tetrahalo-p,p'-biphenols, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, phenethylanilines, and mixtures thereof.
- 73. (previously presented) The article of claim 67, further comprising an antioxidant selected from the group consisting of vitamin E, vitamin E analogs, astaxanthin, ascorbic acid, carotene, and mixtures thereof.
  - 74. (previously presented) A color forming article, comprising:
  - a) a leuco dye;
  - b) an infrared absorber admixed with or in thermal contact with the leuco dye;
- a chroman stabilizer overprinted with respect to the infrared absorber,
  said chroman stabilizer formulated for stabilizing the infrared absorber; and
- d) an anti-oxidant, other than the chroman stabilizer, formulated for inhibiting oxidation of the leuco dye.
- 75. (previously presented) The article of claim 74, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidenes, guaizonyl dyes, eroconium dyes, and mixtures thereof.
- 76. (previously presented) The article of claim 75, wherein the infrared absorber is selected from the group consisting of pyrimidinetrione-cyclopentylidene and guaizonyl dye and the stabilizer is a nickel dithiolane complex.

- 77. (previously presented) The article of claim 76, wherein the infrared absorber is selected from the group consisting of 2,4,6(111,311,511)-pyrimidinetrione 5-[2,5-bis[(1-ethyl-1,3-dihydro-3,3-dimethyl-211-indol-2-ylidene)ethylidene]cyclopentylidene]- (9CI); 2,4,6(111,311,511)-pyrimidinetrione 5-[2,5-bis[(1,3-dihydro-1,1,3-trimethyl-211-benz[e]indol-2-ylidene)ethylidene]cyclopentylidene]-1,3-dimethyl- (9CI); methanaminium N-[5-[3-[5-(dimethylamino)-2-thienyl]-2-hydroxy-4,5-dioxo-2-cyclopenten-1-ylidene]-2(51I)-thienylidene]-N-methyl- inner salt (9CI); cyclobutenediylium 1,3-bis[3,8-dimethyl-5-(1-methylethyl)-1-azulenyl]-2,4-dihydroxy- bis(inner salt) (9CI); and mixtures thereof.
- 78. (previously presented) The article of claim 74, wherein the color forming article is optimized for development using infrared radiation having a wavelength of from about 750 nm to about 900 nm.
- 79. (previously presented) The article of claim 74, wherein the leuco dye is selected from the group consisting of fluorans, phthalides, amino-triarylmethanes, aminoxanthenes, aminothioxanthenes, amino-9,10-dihydro-acridines, aminophenoxazines, aminophenothiazines, aminodihydro-phenazines, aminodiphenylmethanes, aminohydrocinnamic acids and corresponding esters, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, indanones, leuco indamines, hydrozines, leuco indigoid dyes, amino-2,3-dihydroanthraquinones, tetrahalo-p,p\*-biphenols, 2(p-hydroxyphenyl)-4,5-diphenylimidazoles, phenethylanilines, and mixtures thereof.
- 80. (previously presented) The article of claim 74, wherein the anti-oxidant is selected from the group consisting of vitamin E, vitamin E analogs, astaxanthin, ascorbic acid, carotene, and mixtures thereof.